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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,901	08/28/2003	Hirobumi Nishida	R2184.0260/P260	5611
24998 7590 04/02/2007 DICKSTEIN SHAPIRO LLP 1825 EYE STREET NW Washington, DC 20006-5403			EXAMINER KASSA, YOSEF	
			ART UNIT 2624	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/02/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/649,901	<b>Applicant(s)</b> NISHIDA, HIROBUMI	
	<b>Examiner</b> YOSEF KASSA	<b>Art Unit</b> 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 August 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-87 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 30-70 is/are rejected.
- 7) ☒ Claim(s) 13-29 and 71-87 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/03&amp;11/03</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12, 30-41 and 59-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moed et al (U.S. Patent 5,889,885).

Regarding to claim 1, Moed discloses a character area extraction part extracting a character area from an original image that is a digital image (please refer col. 5, lines 38-42);

a class classification part classifying pixels belonging to said character area into a first class and a second class according to colors (refer col. 3, lines 1-10);

a black-character-color/ground-color estimation part estimating a black character color and a ground color on said original image according to the pixels belonging to said character area being classified into said first class and said second class (refer col. 8, lines 7-14); and

a tone correction part performing a tone correction to said original image according to the estimated black character color and the estimated ground color (col. 8, lines 10-14). Although, Moed reference does not expressly call for first class and second class, it would have been obvious if not inherent, that Moed does in fact recites

"background class and foreground class", the background and foreground image data classified based in black and white color. Thus, an ordinary artisan would have recognized the term "background class and foreground class", is used in Moed reference can be interpreted as first class and second class.

Claim 2 is similarly analyzed and rejected the same as claim 1. Except, the additional limitation "a tone correction part performing a tone correction to said original image by replacing a color of the specified background area with the estimated background color". However, at the same field of endeavor, Schindler taught this feature (refer col. 16, lines 58-63). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the teaching Schindler foreground image and background image processing system into Moed system. The suggestion/motivation for doing so would have been to provide a method of extracting color digital image of arbitrary resolution and treating the extracted image for compositing against background image (please refer to col. 3, lines 45-55 of Schindler). Therefore, it would have been obvious to combine Schindler with Moed to obtain the invention as specified in claim 2.

Claim 3 is similarly analyzed and rejected the same as claim 2.

Claim 4 is similarly analyzed and rejected the same as claim 1. Except, the additional limitation "a feature-value calculation part calculating a feature value with respect to an original image that is a digital image". However, this feature taught by Moed (refer col. 4, lines 45-67).

Claim 5 is similarly analyzed and rejected the same as claims 1 and 4.

Claim 6 is similarly analyzed and rejected the same as claims 1, 2 and 4.

Regarding to claim 7, Moed discloses wherein said feature-value calculation part calculates an average value and a standard deviation of color signals in a window set around each pixel, and said character area extraction part extracts a pixel and pixels around said pixel as said character area according to a color signal value of said pixel in relation to a threshold value based on said average value and said standard deviation (please refer col. 3, lines 19-30 and col. 8, lines 15-29).

Claims 8, 9, 36-38 and 65-67 are similarly analyzed and rejected the same as claim 7.

Regarding to claim 10, Moed discloses wherein said feature-value calculation part calculates an edge amount of each pixel, and said character area extraction part extracts a pixel having the edge amount equal to or larger than a predetermined threshold value, and pixels around said pixel, as said character area (refer col. 7, lines 48-65 and col. 8, lines 43-54).

Claims 11, 12, 39, 40, 41, 69 and 73 are similarly analyzed and rejected the same as claim 10.

Claims 30-41 and 59-70 are similarly analyzed and rejected the same as claims 1-12.

***Allowable Subject Matter***

2. Claims 13-29 and 71-87 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claims 30-58 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claim 30 defines a "an image processing program interpreted by a computer..." embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed "an image processing program interpreted by a computer..." can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on "computer-readable medium" or equivalent in order to make the claim statutory. Any amendment to the claim should be commensurate with its corresponding disclosure.

***Other Prior Art Cited***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. (5581633), (6345130), (5502776) and (5572602).

***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOSEF KASSA whose telephone number is (571) 272-7452. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571) 272-7453. The fax phone numbers for the organization where this application or proceeding is assigned is (571) 273-8300 for regular communication and (571) 273-8300 for after Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service office whose telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.



Art Unit: 2624

For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**PATENT EXAMINER**

Yosef Kassa

03/23/2007.

A handwritten signature in black ink, appearing to read 'Y. Kassa', with a long horizontal flourish extending to the right.